

AT&T WIRELESS PCS, INC.

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 FEB 4 1998

SPECIFICATIONS FOR AT&T WIRELESS SERVICES OR (AT&TWS) PROJECTS

ST. LOUIS

THESE SPECIFICATIONS ARE GENERIC IN NATURE AND MEANT TO COVER A FULL RANGE OF CONDITIONS FOR CELL SITE CONSTRUCTION. THE GRAPHIC DRAWINGS DEFINE SITE SPECIFIC CONSTRUCTION AND DETAILS, AND THE SPECIFICATIONS SHOULD BE APPLIED ACCORDINGLY.

SITE WORK

PART 1 - GENERAL

1.1 SCOPE:

CLEARING, GRUBBING, STRIPPING, EROSION CONTROL, SURVEY, LAYOUT, SUBGRADE PREPARATION AND FINISH GRADING AS INDICATED ON THE DESIGN DRAWINGS.

1.2 REFERENCES:

- A. ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS)
- B. OSHA (OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION)

1.3 INSPECTION AND TESTING

A. FIELD TESTING OF EARTHWORK AND COMPACTION SHALL BE PERFORMED BY CONTRACTOR'S INDEPENDENT TESTING LAB, APPROVED BY AT&TWS.

B. ALL WORK SHALL BE INSPECTED AND RELEASED BY AT&TWS WHO SHALL CARRY OUT THE GENERAL INSPECTION OF THE WORK WITH SPECIFIC CONCERN TO PROPER PERFORMANCE OF THE WORK AS SPECIFIED AND/OR CALLED FOR ON THE DRAWINGS. THE CONTRACTOR'S RESPONSIBILITY SHALL BE TO REQUEST TIMELY INSPECTIONS PRIOR TO PROCEEDING WITH FURTHER WORK THAT WOULD MAKE PARTS OF WORK INACCESSIBLE OR DIFFICULT TO INSPECT.

C. IN ANY CONFLICT OCCURRING BETWEEN DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL BE DEEMED TO HAVE INCLUDED THE INTERPRETATION GIVEN BY THE SPECIFICATIONS. IN THE EVENT OF ANY DISCREPANCY BETWEEN DRAWINGS, DETAILS OR BETWEEN DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL BE DEEMED TO HAVE INCLUDED THE BETTER QUALITY OR MORE EXPENSIVE PROCEDURE AS A PART OF HIS PROPOSAL. GIVE WRITTEN NOTICE TO AT&T WIRELESS SERVICES OF ANY CONFLICT OR DISCREPANCY, WHOSE DECISION WILL CLARIFY SUCH DISCREPANCY.

D. FIGURES GIVEN ON THE DRAWING SHALL GOVERN OVER SCALE AND LARGE SCALE DRAWINGS SHALL GOVERN OVER SMALLER DRAWINGS. IDENTIFY ANY DISCREPANCY TO AT&T WIRELESS SERVICES IN WRITING.

E. CONTRACTOR SHALL CONFORM TO ALL FEDERAL, STATE AND LOCAL LAWS, RULES, CODES OR ORDINANCES IN EFFECT AT THE PLACE OF WORK DURING THE EXECUTION OF ALL PHASES OF THE WORK. IN ADDITION, CONTRACTOR WILL CONFORM TO LANDLORD REQUIREMENTS PERTAINING TO ALL CONSTRUCTION.

F. ALL WORK SHALL BE PERFORMED IN A FIRST CLASS WORKMANLIKE MANNER AS DETERMINED BY AT&T WIRELESS SERVICES, WHOSE DECISION SHALL BE FINAL. CONTRACTOR SHALL GUARANTEE, IN WRITING, ALL MATERIALS AND LABOR TO BE FREE OF DEFECTS FOR A PERIOD OF ONE YEAR FROM THE DATE OF AT&T WIRELESS SERVICES ACCEPTANCE OF THE PROJECT. WITHIN THE ONE YEAR PERIOD, THE CONTRACTOR SHALL, UPON NOTIFICATION FROM AT&T WIRELESS SERVICES OF DEFECTS IN THE WORK, RETURN TO THE PROJECT AND REPAIR, REPLACE OR OTHERWISE MAKE GOOD ANY DEFECTS IN MATERIALS, OR DEFECTIVE WORKMANSHIP AT NO ADDITIONAL COST TO AT&T WIRELESS SERVICES.

G. CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS, (NOT PROVIDED BY AT&TWS) FEES AND LICENSES REQUIRED TO PERFORM ALL ASPECTS OF THE WORK.

1.4 SITE MAINTENANCE AND PROTECTION

PROVIDE ALL NECESSARY JOB SITE MAINTENANCE FROM COMMENCEMENT OF WORK UNTIL COMPLETION OF THE CONTRACT, AS DESCRIBED HERE-IN.

A. AVOID DAMAGE TO THE SITE AND TO EXISTING FACILITIES, STRUCTURES, TREES, AND SHRUBS DESIGNATED TO REMAIN. TAKE PROTECTIVE MEASURES TO PREVENT EXISTING FACILITIES THAT ARE NOT DESIGNATED FOR REMOVAL FROM BEING DAMAGED BY THE WORK.

B. KEEP SITE FREE OF ALL PONDING WATER.

C. EROSION CONTROL MEASURES:

1. ABIDE BY ALL APPLICABLE RULES AND REGULATIONS AS ESTABLISHED BY THE STATE OF MISSOURI AND THE LOCAL REGULATING AGENCY IN CONJUNCTION WITH THE SOILS EROSION AND SEDIMENTATION ACT (ACT. 347 P.A. OF 1972) AS AMENDED.

2. SUBMIT NECESSARY DOCUMENTATION TO THE LOCAL REGULATING AGENCY AND OBTAIN A SOIL EROSION PERMIT.

D. PROVIDE AND MAINTAIN ALL TEMPORARY FENCING, BARRICADES, WARNING SIGNALS AND SIMILAR DEVICES NECESSARY TO PROTECT LIFE AND PROPERTY DURING THE ENTIRE PERIOD OF CONSTRUCTION. REMOVE ALL SUCH DEVICES UPON COMPLETION OF THE WORK.

E. INSURANCE: CONTRACTOR AT ITS OWN EXPENSE, SHALL MAINTAIN THE FOLLOWING STATED LIMITS ON A PER OCCURRENCE BASIS, INCLUDING BUT NOT LIMITED TO: ALL LINES OF COVERAGE SHALL BE PRIMARY AND MAINTAINED WITH A REPUTABLE INSURANCE CARRIER THROUGHOUT THE TERM OF THIS AGREEMENT. AT&T WIRELESS SERVICES, INC. (AT&TWS) SHALL BE NAMED AS AN ADDITIONAL INSURED ON ALL SUCH POLICIES. AT&TWS SHALL BE FURNISHED WITH A COPY OF SUCH POLICY OR POLICIES WHICH SHALL BEAR AN ENDORSEMENT THAT THE SAME SHALL NOT BE CANCELED NOR MATERIALLY REDUCED IN COVERAGE OR LIMITS WITHOUT THIRTY (30) DAYS PRIOR WRITTEN NOTICE TO AT&TWS PRIOR TO THE COMMENCEMENT OF OPERATIONS. IF CONTRACTOR FAILS TO MAINTAIN SUCH INSURANCE, AT&TWS MAY DO SO, AND CONTRACTOR SHALL REIMBURSE AT&TWS FOR THE FULL EXPENSE THEREOF UPON DEMAND.

COMMERCIAL GENERAL LIABILITY INSURANCE \$5,000,000

WORKERS' COMPENSATION INSURANCE STATUTORY

EMPLOYERS' LIABILITY INSURANCE \$1,000,000

ERRORS & OMISSIONS / PROFESSIONAL LIABILITY INSURANCE \$2,000,000

ENVIRONMENT IMPAIRMENT LIABILITY INSURANCE

(CONTRACTOR POLLUTION LEGAL LIABILITY INSURANCE) \$5,000,000

AUTOMOBILE LIABILITY INSURANCE \$2,000,000

HALL RISK PROPERTY INSURANCE TO FULL REPLACEMENT VALUE

F. PROVIDE INGRESS AND EGRESS TO PROJECT SITE FOR DELIVERY OF MATERIALS AND PARKING. PARKING, MATERIAL STORAGE AND USE OF SANITARY FACILITIES ON ADJACING PROPERTIES IS PROHIBITED. ON CO-LOCATION SITES, CONTRACTORS MUST PROVIDE INGRESS AND EGRESS TO OTHER TELECOMMUNICATION COMPANIES AND THEIR CREWS.

PART 2 - PRODUCTS

2.1 SUITABLE BACKFILL & IMPORTED FILL: EXCAVATED INORGANIC COHESIVE MATERIAL AND COHESIONLESS MATERIALS INCLUDING GRAVEL, SAND, INORGANIC LEAN CLAY, GRAVEL SILT, GRAVEL CLAY, SAND CLAY, LEAN CLAY, GRAVEL SILT, GRAVEL CLAY, SAND CLAY, SAND SILT, OR SILT CLAY MATERIAL MUST BE FREE FROM FROZEN LUMPS.

2.2 POROUS GRANULAR EMBANKMENT AND BACKFILL: CONFORM TO LOCAL HIGHWAY DEPARTMENT REGULATIONS.

2.3 SELECT STRUCTURAL FILL: CONFORM TO LOCAL HIGHWAY DEPARTMENT REGULATIONS.

2.4 GRANULAR BEDDING AND TRENCH BACKFILL:

A. COMPACTION-MINIMUM 90% PROCTOR DENSITY.

B. PLACEMENT-MINIMUM 1.0 FT. OVER UTILITY AND TO UNDISTURBED GROUND ADJACENT TO AND BENEATH UTILITY.

2.5 TRENCH BACKFILL:

A. SUITABLE EXCAVATED OR GRANULAR MATERIAL.

B. COMPACT IN LAYERS TO 90% OF MAXIMUM DENSITY.

C. SUITABLE EXCAVATED MATERIAL.

1. MINERAL (INORGANIC) SOIL FREE OF CINDERS, REFUSE, SOD, BOULDERS, ROCKS, PAVEMENT, SOFT OR PLASTIC CLAYS, VEGETABLE OR OTHER ORGANIC MATTER.

2. CAPABLE OF BEING COMPACTED AS SPECIFIED.

3. MOISTURE CONTENT HAS NO BEARING ON THE SUITABILITY OF MATERIALS TO BE USED.

2.6 COARSE AGGREGATE FOR ACCESS ROAD: SURFACE COURSE SHALL CONFORM TO LOCAL HIGHWAY DEPARTMENT REGULATIONS.

2.7 COARSE AGGREGATE FOR ACCESS ROAD: SUBBASE COURSE SHALL CONFORM TO LOCAL HIGHWAY DEPARTMENT REGULATIONS.

2.8 UNSUITABLE MATERIALS: HIGH AND MODERATELY PLASTIC SILTS AND CLAYS, MATERIAL CONTAINING REFUSE, FROZEN LUMPS, DEMOLISHED BITUMINOUS MATERIAL, VEGETATIVE MATTER, WOOD, STONES IN EXCESS OF 3 INCHES IN ANY DIMENSION, AND DEBRIS AS DETERMINED BY AT&T. TYPICALLY THESE WILL BE SOILS CLASSIFIED AS PT, MH, CH, OH, ML, AND OL.

2.9 GEOTEXTILE FABRIC: MIRAFI 600X AND 100X.

2.10 PLASTIC MARKING TAPE: SHALL BE ACID AND ALKALI RESISTANT POLYETHYLENE FILM SPECIFICALLY MANUFACTURED FOR MARKING AND LOCATING UNDERGROUND UTILITIES 6 INCHES WIDE WITH A MINIMUM THICKNESS OF 0.004 INCH. TAPE SHALL HAVE A MINIMUM STRENGTH OF 1500 PSI IN BOTH DIRECTIONS AND MANUFACTURED WITH INTEGRAL WIRES. FOLD BACKS OR OTHER MEANS TO ENABLE DETECTION BY A METAL DETECTOR WHEN BURIED UP TO 3 FT DEEP. THE METALLIC CORE OF THE TAPE SHALL BE ENCASED IN A PROTECTIVE JACKET OR PROVIDED WITH OTHER MEANS TO PROTECT IT FROM CORROSION. TAPE COLOR SHALL BE RED FOR ELECTRIC UTILITIES AND ORANGE FOR TELECOMMUNICATION UTILITIES.

PART 3 - EXECUTION

3.1 GENERAL

A. BEFORE STARTING GENERAL SITE PREPARATION ACTIVITIES, INSTALL EROSION AND SEDIMENT CONTROL MEASURES. THE WORK AREA SHALL BE CONSTRUCTED AND MAINTAINED IN SUCH CONDITION THAT IN THE EVENT OF RAIN THE WORK WILL BE WELL DRAINED AT ALL TIMES. BEFORE STARTING EXCAVATION, ESTABLISH LOCATION AND EXTENT OF UNDERGROUND UTILITIES OCCURRING IN THE WORK AREA. NOTIFY UTILITY COMPANIES TO REMOVE & RELOCATE LINES WHICH ARE IN CONFLICT WITH THE WORK AREA.

B. PERFORM ALL SURVEY, LAYOUT, STAKING, AND MARKINGS TO ESTABLISH AND MAINTAIN ALL LINES, GRADES, ELEVATIONS AND BENCHMARKS NEEDED FOR EXECUTION OF THE WORK. ALL SURVEY WORK SHALL BE PERFORMED BY A LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI.

C. THE CONTRACTOR SHALL PROTECT AND LEAVE IN PLACE ALL SURVEY IRON RODS INDICATING THE AT&T WIRELESS SERVICES LEASE AREA.

D. CLEAR AND GRUB THE AREA WITHIN THE LIMITS OF THE SITE. REMOVE TREES, BRUSH, STUMPS, RUBBISH, AND OTHER DEBRIS AND VEGETATION RESTING ON OR PROTRUDING THROUGH THE SURFACE OF THE SITE AREA TO BE CLEARED AND GRUBBED.

1. REMOVE THE FOLLOWING MATERIALS: ROOTS, STUMPS, AND OTHER DEBRIS, BRUSH, AND REFUSE EMBEDDED IN OR PROTRUDING THROUGH THE GROUND'S SURFACE. RAKE, DISK, OR FLOW THE AREA TO A DEPTH OF NO LESS THAN 6 INCHES, AND REMOVE TO DEPTH OF 6 INCHES ALL ROOTS AND OTHER DEBRIS THEREBY EXPOSED.

2. REMOVE TOPSOIL MATERIAL COMPLETELY FROM THE SURFACE UNTIL THE SOIL NO LONGER MEETS THE DEFINITION OF TOPSOIL. AVOID MIXING TOPSOIL WITH SUBSOIL OR OTHER UNDESIRABLE MATERIALS.

3. EXCEPT WHERE EXCAVATION TO GREATER DEPTH IS INDICATED, FILL DEPRESSIONS RESULTING FROM CLEARING, GRUBBING AND DEMOLITION WORK COMPLETELY WITH SUITABLE FILL.

E. REMOVE FROM THE SITE AND DISPOSE IN AN AUTHORIZED LANDFILL ALL DEBRIS RESULTING FROM CLEARING AND GRUBBING OPERATIONS. BURNING WILL NOT BE PERMITTED.

F. PRIOR TO EXCAVATING, THOROUGHLY EXAMINE THE AREA TO BE EXCAVATED AND/OR TRENCHED TO ASCERTAIN THE EXISTENCE AND LOCATION OF ANY STRUCTURE, UNDERGROUND STRUCTURE, OR OTHER ITEM NOT SHOWN THAT MIGHT AFFECT OR INTERFERE WITH THE NEW CONSTRUCTION. NOTIFY AT&T OF ANY OBSTRUCTIONS THAT WILL PREVENT ACCOMPLISHMENT OF THE WORK AS INDICATED ON THE DRAWINGS.

G. SEPARATE AND STOCKPILE ALL EXCAVATED MATERIALS SUITABLE FOR BACKFILL. STOCKPILE EXCAVATED MATERIALS AWAY FROM THE EDGE OF EXCAVATIONS. DISPOSE OF EXCESS EXCAVATED SOIL MATERIAL AND MATERIALS NOT ACCEPTABLE FOR USE AS BACKFILL OR FILL OFF-SITE AT NO ADDITIONAL COST TO THE OWNER.

H. CONTACT DIG-RITE @ 1-(800) DIG-RITE OR A SIMILAR AGENT THREE WORKING DAYS PRIOR TO BEGINNING ANY PORTION OF CONSTRUCTION.

I. EACH BIDDER SHALL VISIT THE SITE AND ASCERTAIN FOR HIMSELF ALL EXISTING CONDITIONS AND ANY CIRCUMSTANCES THAT WILL AFFECT THE CONDUCT OF HIS WORK. INCLUDE ALL COSTS NECESSARY AS A RESULT OF EXISTING CONDITIONS AS A PART OF THE PROPOSAL.

J. CONTRACTORS ARE EXPECTED TO SUPPLY SUFFICIENT MANPOWER FROM THE BEGINNING OF THE PROJECT UNTIL ITS COMPLETION TO COMPLETE THE PROJECT ACCORDING TO THE TIME AGREED TO IN THE AGREEMENT. FAILURE OF THE CONTRACTOR TO ADEQUATELY STAFF THE PROJECT, OR FAILURE TO MAINTAIN MANPOWER AT THE SITE AT ALL TIMES DURING THE EXECUTION OF THE WORK WILL BE CAUSE FOR TERMINATION.

K. NO ORAL COMMUNICATIONS WILL BE HONORED BY AT&T WIRELESS SERVICES. ADDRESS ALL INQUIRIES TO AT&T WIRELESS SERVICES IN WRITING. ONLY WRITTEN RESPONSES WILL BE EFFECTIVE AS ALTERING ANY PART OF THE WORK. DO NOT PERFORM ANY WORK WHICH INVOLVES A CHANGE IN THE CONSTRUCTION COST WITHOUT WRITTEN APPROVAL BY AT&T WIRELESS SERVICES. ANY WORK PERFORMED BY THE CONTRACTOR WITHOUT WRITTEN AUTHORIZATION IS AT THE CONTRACTOR'S RISK.

L. CONTRACTOR SHALL MAKE ARRANGEMENTS TO UNLOAD AND PLACE AT&T WIRELESS SERVICES FURNISHED EQUIPMENT IN PLACE AND MAKE ALL OF THE CONNECTIONS. ONCE AT&T WIRELESS SERVICES EQUIPMENT IS TURNED OVER TO THE CONTRACTOR, HE ASSUMES COMPLETE RESPONSIBILITY FOR PROTECTION FROM LOSS OR DAMAGE.

M. CONTRACTOR SHALL BE RESPONSIBLE FOR MAKING ALL NOTIFICATIONS TO THE PROPER AUTHORITIES FOR INSPECTION AND ANY TESTING IDENTIFIED BY THE SPECIFICATIONS OR REQUIRED BY LAW. OBTAIN ALL CERTIFICATES OF INSPECTION AND OCCUPANCY.

N. MAKE COMPLETE FIELD MEASUREMENTS AT THE JOB SITE, TO INCLUDE TOWER BOLT PLACEMENT AND SHELTER PAD PLACEMENT VERIFY DIMENSIONS OF EQUIPMENT SCHEDULES TO BE INSTALLED IN THE PROJECT. NOTIFY AT&T WIRELESS SERVICES OF ANY DISCREPANCIES.

O. PROVIDE LIFTS, HOISTS, CRANES OR OTHER EQUIPMENT NECESSARY TO UNLOAD, HANDLE AND TRANSPORT EQUIPMENT, PRODUCTS AND OTHER MATERIALS AT THE JOB SITE. PROTECT EXISTING BUILDING FROM DAMAGE DURING CONSTRUCTION AND REPAIR, REPLACE OR OTHERWISE MAKE GOOD ANY DAMAGE CAUSED TO THE BUILDING OR ITS CONTENTS.

P. CONTRACTOR WILL COORDINATE WITH THE LOCAL UTILITY COMPANIES AS TO UTILITY LOCATION/RELOCATION AND UTILITY SERVICES AND FINALIZE ALL POWER REQUIREMENTS TO THE SITE.

Q. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OF THE PROJECT. PROMPTLY REMOVE TRASH AND DEBRIS RESULTING FROM OPERATIONS FROM THE SITE AS IT ACCUMULATES. ANY DUST, DIRT OR DEBRIS ASSOCIATED WITH A TRADE SHALL BE REMOVED BY THAT TRADE. IN ADDITION, THAT TRADE WILL SWEEP THE COMPLETE AREA CLEAN AT THE CONCLUSION OF EACH WEEK'S WORK AND WHEN HE LEAVES THE SITE. MAKE ARRANGEMENTS FOR TRASH DISPOSAL OR OTHERWISE REMOVE ALL TRASH FROM THE SITE. DO NOT USE THE LANDLORD'S TRASH RECEPTACLE. ALSO, THE CLEANING OF THE INSIDE OF THE SHELTER AND WAXING OF THE FLOORS.

R. ALL ITEMS REQUIRED REMOVAL FROM SITE SHALL BE PROPERLY DISPOSED OF OFF-SITE BY GENERAL CONTRACTOR.

3.2 STRUCTURAL EXCAVATION

A. FOUNDATION EXCAVATIONS SHALL BE CUT TO FIRM MATERIAL AND SHALL BE FREE OF ALL LOOSE AND WET MATERIALS. IF THE BOTTOM OF THE EXCAVATION IS NOT FIRM AND STABLE, EXCAVATE AN ADDITIONAL 12 INCHES, COMPACT AND FILL WITH 12 INCHES OF SELECT STRUCTURAL FILL.

B. AFTER EXCAVATION, THE EXPOSED SOILS SHALL BE INSPECTED AND TESTED AND ANY UNSUITABLE DEPOSITS REMOVED AS DIRECTED TO REACH SUITABLE BEARING SOIL. ALL OVER-EXCAVATED AREAS SHALL BE BACKFILLED WITH SELECT STRUCTURAL FILL OR WITH LEAN CONCRETE FILL TO THE ELEVATION OF BOTTOM OF FOOTING OR FOUNDATION AS INDICATED ON THE DRAWINGS.

C. PRIOR TO PLACEMENT OF CONCRETE FOUNDATIONS, THE SURFACE ON WHICH THE CONCRETE IS TO BE PLACED SHALL BE COMPACTED TO A MINIMUM OF 90% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE MODIFIED PROCTOR TEST, ASTM D 1557.

D. NO FOUNDATIONS OR STRUCTURES SHALL BE CONSTRUCTED UNTIL THE BASE MATERIALS HAVE BEEN INSPECTED BY AT&T WIRELESS SERVICES.

3.3 BACKFILL

A. AS SOON AS PRACTICAL, AFTER COMPLETING CONSTRUCTION OF THE RELATED STRUCTURE, BACKFILL THE EXCAVATION WITH APPROVED MATERIAL TO RESTORE THE REQUIRED FINISH GRADE.

1. PRIOR TO PLACING BACKFILL AROUND STRUCTURES, ALL FORMS SHALL HAVE BEEN REMOVED AND THE EXCAVATION CLEANED OF ALL TRASH, DEBRIS, AND UNSUITABLE MATERIALS.

2. DO NOT PLACE BACKFILL AROUND NEW CAST-IN-PLACE CONCRETE STRUCTURES UNTIL THE CONCRETE HAS CURED FOR AT LEAST 3 DAYS.

3. BACKFILL BY PLACING AND COMPACTING SUITABLE BACKFILL MATERIAL OR SELECT GRANULAR BACKFILL MATERIAL, WHEN REQUIRED, IN UNIFORM HORIZONTAL LAYERS OF NO GREATER THAN 8 INCHES LOOSE THICKNESS.

B. THOROUGHLY COMPACT EACH LAYER OF BACKFILL TO A MINIMUM OF 90% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE MODIFIED PROCTOR TEST, ASTM D 1557.

3.4 TRENCH EXCAVATION

A. UTILITY TRENCHES SHALL BE EXCAVATED TO THE LINES AND GRADES SHOWN ON THE DRAWINGS OR AS DIRECTED BY AT&T WIRELESS SERVICES. PROVIDE SHORING, SHEETING AND BRACING AS REQUIRED TO PREVENT CAVING OR SLOUGHING OF THE TRENCH WALLS.

B. EXTEND THE TRENCH WIDTH A MINIMUM OF 6 INCHES BEYOND THE OUTSIDE EDGE OF THE OUTERMOST CONDUIT.

C. WHEN SOFT, YIELDING OR OTHERWISE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED AT THE REQUIRED TRENCH BOTTOM ELEVATION, OVER EXCAVATE THE TRENCH TO A DEPTH OF NO LESS THAN 1/2 INCHES BELOW THE REQUIRED ELEVATION AND BACKFILL WITH GRANULAR BEDDING MATERIAL.

3.5 TRENCH BACKFILL

A. PROVIDE GRANULAR BEDDING MATERIAL IN ACCORDANCE WITH THE DRAWINGS AND THE UTILITY REQUIREMENTS.

B. NOTIFY AT&T WIRELESS SERVICES 24 HOURS IN ADVANCE OF BACKFILLING.

C. CONDUCT UTILITY CHECK TESTS BEFORE BACKFILLING. BACKFILL AND COMPACT TRENCH BEFORE ACCEPTANCE TESTING.

D. PLACE GRANULAR TRENCH BACKFILL UNIFORMLY ON BOTH SIDES OF THE CONDUITS IN 6 INCH UNCOMPACTED LIFTS UNTIL 12 INCHES OVER THE CONDUITS. SOLIDLY RAM AND TAMP BACKFILL INTO SPACES AROUND CONDUITS.
 E. PROTECT CONDUIT FROM LATERAL MOVEMENT, DAMAGE FROM IMPACT OR UNBALANCED LOADINGS.

F. ABOVE THE CONDUIT EMBEDMENT ZONE, PLACE AND COMPACT SATISFACTORY BACKFILL MATERIAL IN 9 INCH MAXIMUM LOOSE THICKNESS LIFTS TO RESTORE THE REQUIRED FINISHED SURFACE GRADE.

G. COMPACT FINAL TRENCH BACKFILL TO A DENSITY EQUAL TO OR GREATER THAN THAT OF THE EXISTING UNDISTURBED MATERIAL IMMEDIATELY ADJACENT TO THE TRENCH BUT NO LESS THAN A MINIMUM OF 95% OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE STANDARD PROCTOR TEST, ASTM D 698.

3.6 AGGREGATE ACCESS ROAD (WHERE APPLICABLE)

A. CLEAR, GRUB, STRIP AND EXCAVATE FOR THE ACCESS ROAD TO THE LINES AND GRADES INDICATED ON THE DRAWINGS. SCARIFY TO A DEPTH OF 6 INCHES AND PROOF-ROLL. ALL HOLES, RUTS, SOFT PLACES AND OTHER DEFECTS SHALL BE CORRECTED.

B. THE ENTIRE SUBGRADE SHALL BE COMPACTED TO NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE MODIFIED PROCTOR TEST, ASTM D 1557.

C. AFTER PREPARATION OF THE SUBGRADE IS COMPLETE THE GEOTEXTILE FABRIC SHALL BE INSTALLED (WHERE APPLICABLE) TO THE LIMITS INDICATED ON THE DRAWINGS BY ROLLER. THE FABRIC CUT LONGITUDINALLY ALONG THE ROADWAY. THE FABRIC SHALL NOT BE DRAGGED ACROSS THE SUBGRADE. PLACE THE ENTIRE ROLL IN A SINGLE OPERATION, ROLLING THE MATERIAL OUT AS SMOOTHLY AS POSSIBLE.

1. OVERLAPS PARALLEL TO THE ROADWAY WILL BE PERMITTED AT THE CENTERLINE AND AT LOCATIONS BEYOND THE ROADWAY SURFACE WIDTH (I.E., WITHIN THE SHOULDER WIDTH) ONLY. NO LONGITUDINAL OVERLAPS SHALL BE LOCATED BETWEEN THE CENTERLINE AND THE SHOULDER. PARALLEL OVERLAPS SHALL BE A MINIMUM OF 3 FEET WIDE.

2. TRANSVERSE (PERPENDICULAR TO THE ROADWAY) OVERLAPS AT THE END OF A ROLL SHALL OVERLAP IN THE DIRECTION OF THE AGGREGATE PLACEMENT (PREVIOUS ROLL ON TOP) AND SHALL HAVE A MINIMUM LENGTH OF 3 FEET.

3. ALL OVERLAPS SHALL BE PINNED WITH STAPLES OR NAILS BETWEEN 10 AND 12 INCHES LONG TO INSURE STABLE POSITIONING DURING PLACEMENT OF AGGREGATE. PIN LONGITUDINAL SEAMS AT 25 FOOT CENTERS AND TRANSVERSE SEAMS EVERY 5 FEET ON CENTER.

D. THE AGGREGATE BASE AND SURFACE COURSES SHALL BE CONSTRUCTED IN LAYERS NOT MORE THAN 6 INCHES (COMPACTED) THICKNESS. AGGREGATE TO BE PLACED ON GEOTEXTILE FABRIC SHALL BE END-DUMPED ON THE FABRIC FROM THE FREE END OF THE FABRIC OR OVER PREVIOUSLY PLACED AGGREGATE. THE FIRST LIFT SHALL BE BLADED DOWN TO A THICKNESS WHICH WILL PRODUCE A COMPACTED LAYER NOT TO EXCEED 6 INCHES. AT NO TIME SHALL EQUIPMENT, EITHER DUMPING THE AGGREGATE OR GRADING THE AGGREGATE, BE PERMITTED ON THE ROADWAY WITH LESS THAN 8 INCHES OF MATERIAL COVERING THE FABRIC.

E. THE AGGREGATE SHALL BE IMMEDIATELY COMPACTED TO NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AS PROVIDED BY THE MODIFIED PROCTOR TEST, ASTM D 1557 WITH A TAMING ROLLER, OR WITH A PNEUMATIC-TIRED ROLLER, OR WITH A VIBRATORY MACHINE OR ANY COMBINATION OF THE THREE. THE TOP LAYER SHALL BE GIVEN A FINAL ROLLING WITH A THREE-WHEEL OR TANDEM ROLLER.

3.7 FINISH GRADING - SITE

A. PERFORM ALL FINISHED GRADING TO PROVIDE SMOOTH, EVEN SURFACE DRAINAGE OF THE ENTIRE AREA WITHIN THE LIMITS OF CONSTRUCTION. GRADING SHALL BE COMPATIBLE WITH ALL SURROUNDING TOPOGRAPHY AND STRUCTURES.

B. UTILIZE SATISFACTORY FILL MATERIALS RESULTING FROM THE EXCAVATION WORK IN THE CONSTRUCTION OF FILLS, EMBANKMENTS AND FOR THE REPLACEMENT OF REMOVED UNSUITABLE MATERIALS.

C. ACHIEVE FINISHED GRADE BY PLACING A MINIMUM OF 4-INCHES OF CRUSHED STONE, ON TOP OF GEOTEXTILE FABRIC.

D. REPAIR ALL ACCESS ROADS AND SURROUNDING AREAS USED DURING THE COURSE OF THIS WORK TO THEIR ORIGINAL CONDITION.

AGGREGATE SURFACING

PART 1 - GENERAL

1.01 SUMMARY

A. PROVIDE CRUSHED STONE AGGREGATE OVER PREPARED SUBGRADE.

B. PROVIDE GEOTEXTILE FABRIC FOR WEED CONTROL.

1.02 SUBMITTALS

A. SUBMIT FOR APPROVAL NAME OF TYPE OF AGGREGATE AND GEOTEXTILE FABRIC.

1.03 QUALITY ASSURANCE

A. COMPLY WITH GOVERNING CODES & REGULATIONS. PROVIDE PRODUCTS OF ACCEPTABLE MANUFACTURERS WHICH HAVE BEEN IN SATISFACTORY USE IN SIMILAR SERVICE FOR THREE YEARS. USE EXPERIENCED INSTALLERS. DELIVER, HANDLE, AND STORE MATERIALS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS.

PART 2 - PRODUCTS

2.01 MATERIALS

A. CRUSHED STONE AGGREGATE

B. GEOTEXTILE FABRIC

C. REDWOOD HEADERS AND STAKES.

PART 3 - EXECUTION

3.01 INSTALLATION

A. INSTALL MATERIALS AND SYSTEMS IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS AND APPROVED SUBMITTALS. INSTALL MATERIALS AND SYSTEMS IN PROPER RELATION WITH ADJACENT CONSTRUCTION. COORDINATE WITH WORK OF OTHER SECTIONS.

REVISIONS

NO.	DATE	DESCRIPTIONS

AT&T WIRELESS PCS, INC.
SPECIFICATIONS

Farnsworth Polk, Inc.

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St. Louis, MO 63119

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TITLE: SPECIFICATIONS

DATE: 2-18-1996

DRAFTED: M. Roth

PROJECT NO.: 297000

SHEET: SPEC-1

STATE OF MISSOURI